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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,067	10/12/2001	Nobuo Ishii	08038.0055	9990

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EXAMINER

VAN, QUANG T

ART UNIT PAPER NUMBER

3742

DATE MAILED: 10/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/975,067

Applicant(s)

ISHII ET AL.

Examiner

Quang T Van

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 5-14 and 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 15 and 17 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Election/Restrictions

1. Applicant's election without traverse of Species I (figures 1A-2, claims 1-4, 15 and 17) in Paper No. 8 is acknowledged. Non-elected claims 5-14, and 16 are withdrawn from consideration.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

3. Figures 17-19 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. The specification is objected to because of the following informalities:
"processing container 15" recited on page 1, line 18 and "processing container 123" recited on page 2, line 5 have a typo error and should be changed to "processing container **13**". The term "a processing space 17" recited on page 7, line 33 has a typo error and should be changed to "a processing space **57**". The term "directional coupler 70" recited on page 9, line 8 has a typo error and should be changed to "directional coupler **79**". The term "the antenna 53" recited on page 11, line 26 has a typo error and should be changed to "the antenna **73**". The term "a center line 404" recited on page

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17, lines 37 has a typo error and should be changed to "a center line **403**" (see figure 16). Correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 3, 15 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Matsumoto (US 6,358,361). Matsumoto discloses a plasma processor comprising a processing container (1) in form of cylinder with a bottom (col. 7, line 28-29); a supporting unit (3) disposed in the processing container to support an object to be processed; a dielectric window (14) arranged in an opening of the processing container (1) to close up the processing container in an air-tight manner, the dielectric window (14) being made of dielectric allowing a high-frequency wave to permeate the dielectric window into an interior of the processing container (col. 8, lines 13-22); an annular waveguide (12) shaped in form of a ring to introduce the high-frequency wave into the processing container (1) through the dielectric window (14) and also fitted to the dielectric window so that a plane containing an annular waveguide path of the annular waveguide (12) extends along the dielectric window (14); and a traveling-wave

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generator (30) arranged at the annular waveguide (12) to produce a traveling wave in form of an endless ring in the annular waveguide (12).²²

7. Claims 1-3, 15 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Suzuki et al (US 6,497,783). Suzuki discloses a plasma processing apparatus comprising a processing container (101) in form of cylinder with a bottom; a supporting unit (102) disposed in the processing container (101) to support an object to be processed; a dielectric window (104) arranged in an opening of the processing container (101) to close up the processing container in an air-tight manner (col. 15, lines 61-63), the dielectric window (104) being made of dielectric allowing a high-frequency wave to permeate the dielectric window into an interior of the processing container (col. 11, lines 41-44); an annular waveguide (103) shaped in form of a ring (col. 9, lines 46-48) to introduce the high-frequency wave into the processing container (101) through the dielectric window (104) and also fitted to the dielectric window so that a plane containing an annular waveguide path of the annular waveguide (103) extends along the dielectric window (104); and a traveling-wave generator (6) arranged at the annular waveguide (103) to produce a traveling wave in form of an endless ring in the annular waveguide (103).

8. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not show or suggest the traveling-wave generator

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has a multiphase high-frequency wave supplier for supplying several positions apart from each other in the circumferential direction of the annular waveguide with high-frequency waves whose phases are shifted from each other in the circumferential direction, whereby the supply of the high-frequency waves whose phases are shifted from each other in the circumferential direction of the annular waveguide allows the traveling wave to be generated in the annular waveguide as recited in claim 4.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Murakawa et al (US 6,388,632) discloses a slot antenna used for plasma surface processing apparatus.

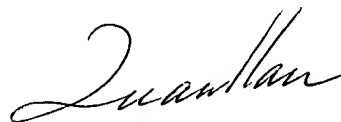
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang T Van whose telephone number is 703-306-9162. The examiner can normally be reached on 8:00Am 7:00Pm M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sang Paik can be reached on 703-308-1147. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0861.



QV
September 23, 2003



Quang T Van
Primary Examiner
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